

AMENDMENTS TO THE CLAIMS

Claims 1.-36. (Cancelled)

37. (Original) A carbon nanotube particulate comprising a plurality of small-diameter carbon nanotubes arranged in a 3-dimensional network in the carbon nanotube particulate, wherein the carbon nanotube particulate has a cross-sectional dimension of less than about 1000 microns and wherein the small-diameter carbon nanotubes have a diameter in the range of about 0.5 nm and about 3 nm.

38. (Original) The carbon nanotube particulate of claim 37 wherein the small-diameter carbon nanotubes are selected from the group consisting of single-walled carbon nanotubes, double-walled carbon nanotubes, triple-walled carbon nanotubes, quadruple-walled carbon nanotubes and combinations thereof.

39. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate has a bulk density in a range of about 0.01 g/cm³ and about 0.5 g/cm³.

40. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate has a cross-sectional dimension in the range of about 0.1 micron and about 1000 microns.

41. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate has a cross-sectional dimension in the range of about 1 micron and about 100 microns.

42. (Original) The carbon nanotube particulate of claim 37 wherein the small-diameter carbon nanotubes span between more than one carbon nanotube particulate.

43. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate has a surface area in the range of about 100 m²/g and about 1000 m²/g.

44. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate comprises ropes of small-diameter carbon nanotubes.

45. (Original) The carbon nanotube particulate of claim 44 wherein the ropes have a cross-sectional dimension in a range of about 10 nm and about 50 nm.

46. (Original) The carbon nanotube particulate of claim 44 wherein the ropes have a cross-sectional dimension less than 10 nm.

47. (Currently amended) The carbon nanotube particulate of claim 37 wherein the carbon nanotube particulate is ~~annealed to form~~ an annealed carbon nanotube particulate.

48. (Original) The carbon nanotube particulate of claim 47 wherein the annealed carbon nanotube particulate is stable in air at a temperature greater than about 400°C.

49. (Original) The carbon nanotube particulate of claim 47 wherein the annealed carbon nanotube particulate is stable in air at a temperature in excess of about 450°C.

50. (Original) The carbon nanotube particulate of claim 47 wherein the annealed carbon nanotube particulate is stable in air at a temperature in excess of about 500°C.

51. (Original) The carbon nanotube particulate of claim 47 wherein the annealed carbon nanotube particulate is stable in air at a temperature in excess of about 550°C.

52. (Previously presented) The carbon nanotube particulate of claim 37 wherein a plurality of carbon nanotube particulates are present in a matrix material, wherein the plurality of carbon nanotube particulates is present at a concentration in the range of about 0.001 wt% and about 50 wt%.

53. (Currently amended) The carbon nanotube particulate of claim 52 wherein the matrix material is selected from the group consisting of thermoplastic polymers, thermoset polymers, metals, ceramics, and combinations thereof.

54. (Original) The carbon nanotube particulate of claim 37 wherein a plurality of carbon nanotube particulates are present in a matrix material comprising a polymer, wherein the plurality of carbon nanotube particulates is present at a concentration in a range of about 0.001 wt% and about 50 wt%.

55. (Original) The carbon nanotube particulate of claim 37 wherein the carbon nanotubes are derivatized carbon nanotubes.

56. (Previously presented) The carbon nanotube particulate of claim 37 wherein the carbon nanotubes are fluorinated carbon nanotubes.

57. (Original) The carbon nanotube particulate of claim 55 wherein the derivatized carbon nanotubes comprise one or more functional groups.

58. (Original) The carbon nanotube particulate of claim 55 wherein the carbon nanotube particulates comprising the derivatized carbon nanotubes are in a composite material comprising a matrix material selected from the group consisting of thermoplastic polymers, thermoset polymers, metals, ceramics, and combinations thereof.

59. (Original) The carbon nanotube particulate of claim 56 the carbon nanotube particulates comprising the fluorinated carbon nanotubes are in a composite material comprising a matrix material selected from the group consisting of thermoplastic polymers, thermoset polymers, metals, ceramics, and combinations thereof.

60. (Original) The carbon nanotube particulate of claim 57 wherein the carbon nanotube particulates comprising the derivatized carbon nanotubes comprising one or more functional groups are in a composite material comprising a matrix material selected from the group consisting of thermoplastic polymers, thermoset polymers, metals, ceramics, and combinations thereof.

61. (Original) The carbon nanotube particulate of claim 37 wherein the particulate is present in a field emission device.

62. (Original) The carbon nanotube particulate of claim 37 wherein the particulate is present in a cathode of a field emission device.

Claims 63.-93.(Cancelled)

94. (Original) A product of the process, comprising:
- (a) providing a catalyst comprising catalytic metal on a particulate support, wherein the particulate support has a cross-sectional dimension of less than about 1000 microns,
 - (b) contacting the catalyst with a gaseous stream comprising a carbon-containing feedstock at a sufficient temperature and for a contact time sufficient to make a carbon product on the catalyst wherein the carbon product comprises small-diameter carbon nanotubes, wherein the small-diameter carbon nanotubes have a outer diameter in the range of about 0.5 nm and about 3 nm, and
 - (c) removing the particulate support from the carbon product to form carbon nanotube particulates, wherein the carbon nanotube particulates retain a macroscopic morphology of an approximate shape and an approximate cross-sectional dimension as before removal of the particulate support.
95. (Original) The product of claim 94 further comprising annealing the carbon nanotube particulates.
96. (Original) The product of claim 94 wherein the small-diameter carbon nanotubes are selected from the group consisting of single-walled carbon nanotubes, double-walled carbon nanotubes, triple-walled carbon nanotubes, quadruple-walled carbon nanotubes and combinations thereof.